



O. H. M. S.

*B. J. Gerald*  
*Deputy Minister.*

---

**LABORATORY**

OF THE

**INLAND REVENUE DEPARTMENT**

OTTAWA, CANADA

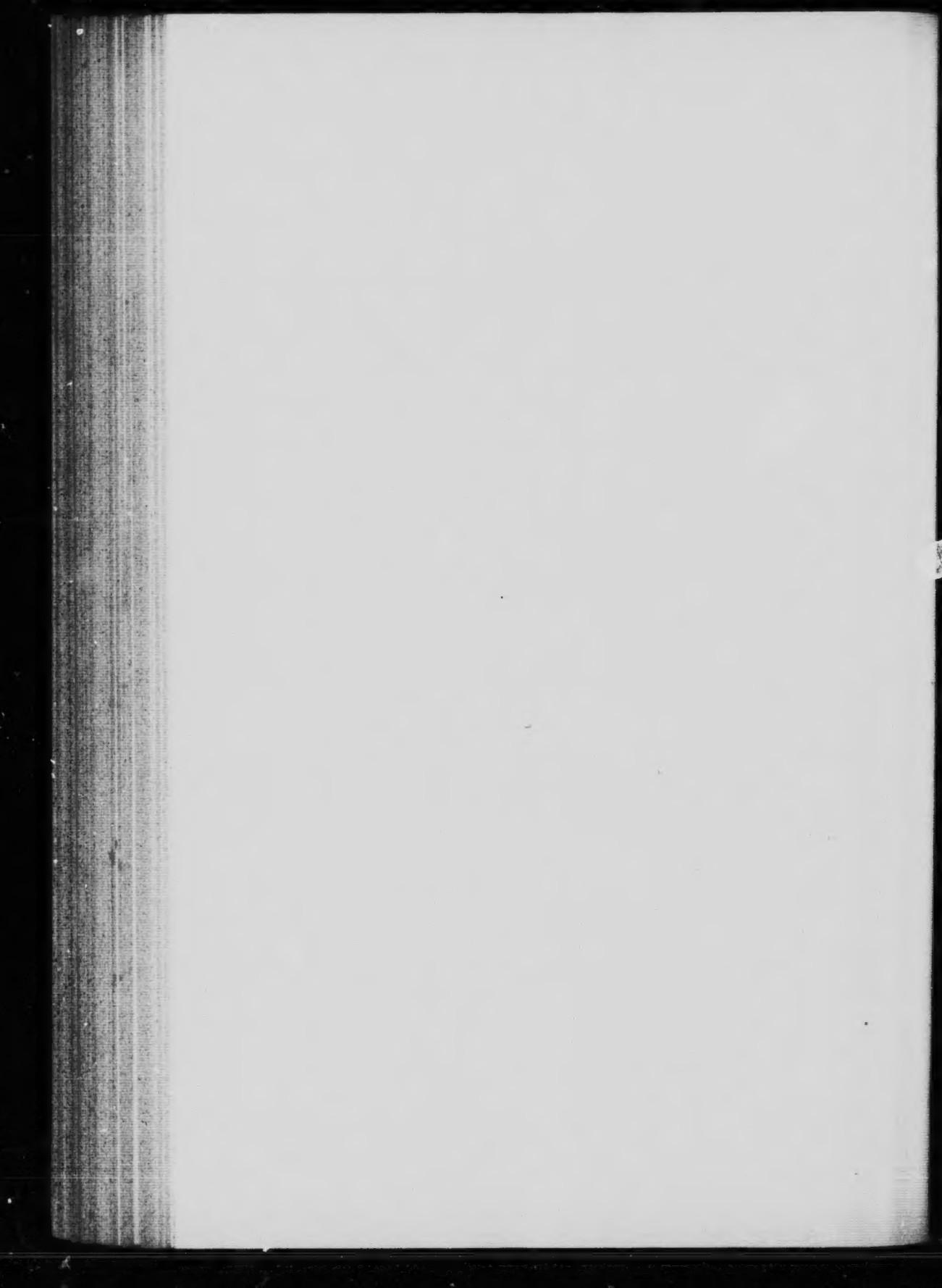
---

**BULLETIN No. 194**

---

**FRUIT JAMS**

---



**LABORATORY**  
 OF THE  
**INLAND REVENUE DEPARTMENT**  
 OTTAWA, CANADA.

**BULLETIN No. 194**

**FRUIT JAMS**

OTTAWA, December 14, 1909.

W. J. GERALD, Esq.,

Deputy Minister of Inland Revenue.

SIR,—In July of this year an order was issued for the collection of ten (10) samples of Fruit Jams, in each of the (15) Inspector Districts of Canada. Our Inspectors were instructed to procure strawberry and raspberry jams by preference. The following table shows the character of the collection made:—

District.	Jams.	Compounds.	Canned Fruit.	Total.
Nova Scotia.....	10	0	0	10
Prince Edward Island.....	3	7	0	10
New Brunswick.....	7	3	0	10
Quebec.....	1	2	7	10
St. Hyacinthe.....	9	0	1	10
Montreal.....	7	3	0	10
Ottawa.....	10	0	0	10
Kingston.....	8	2	0	10
Toronto.....	10	0	0	10
London.....	7	4	0	11
Windsor.....	10	0	0	10
Manitoba.....	10	0	0	10
Calgary.....	10	0	0	10
Vancouver.....	9	1	0	10
Victoria.....	5	0	0	5
	116	22	8	146

Thirty samples which do not meet the requirements of this inspection, being labelled and sold as Compounds, or being Canned Fruit, and not jam, are excluded from this report. Of the 116 samples sold as jam, the following are the results of analysis:—

	Samples.
Found genuine.....	108
" doubtful.....	7
" adulterated.....	1
Total.....	116

No. 975 is a very old sample, which has evidently been kept in a hot place; and not being perfectly sealed, has dried so as to be unfit for use.

Nos. 41273, 41277, 35988, 35991, 978, 983.—These samples contain dextrin, and are evidently made with addition of glucose, but in small quantity. It is an open question whether or not the addition of small amounts of glucose without declaration of the fact is permissible in jams. Some manufacturers consider the use of five to ten per cent of glucose as desirable, to prevent the separation of sugar by crystallization on long keeping. This question should be determined. The fact that many of the best makers of fruit jam do not use glucose seems to point to the needlessness of introducing even small amounts of the article into jam.

No. 36797. This sample contains a considerable amount of glucose. On account of the very variable nature of commercial glucose the actual amount present can only be approximated, and is at least 20 per cent.

It is true that no legal definition of jam, or explicit standard for the article as required by Section 26 of the Adulteration of Food Act, yet exists for Canada. Nevertheless the meaning of jam as 'a conserve of fruit, boiled in mass, with sugar and water,' is so well recognized; and the term has legal meaning in so many countries, that I have no hesitation in declaring a product made with more than ten per cent of glucose, as adulterated under the Act.

The following definition for jam is submitted for criticism and comment; and it is hoped that a legal definition and standard for this important article will be established before another collection is made:

*Jam*, (marmalade) is the sound product made from clean, sound, properly matured and prepared fresh fruit and sugar (sucrose) by boiling to a pulpy or semi-solid consistence, and conforms in name to the fruit used, and in its preparation not less than forty-five (45) pounds of fruit are used to each fifty-five (55) pounds of sugar.

*Jam* may be made with glucose instead of sugar, in whole or in part; and with admixture of other fruits than that which gives its name to the article, so long as the fruit so added does not exceed fifty (50) per cent of the total weight of fruit present, and provided that the word *Compound* is printed on the label, as an integral part of the same, and in letters as large as those which name the fruit of which the jam purports to be essentially made.

Section 24 (d) of the Adulteration Act provides that no food shall be deemed to be adulterated when 'Articles of food not injurious to the health are mixed together as a compound, and sold or offered for sale as such, with each package, roll, parcel or vessel containing such articles distinctly labelled as a mixture in conspicuous characters forming an inseparable part of a general label bearing the name and address of the manufacturer.' 53 V., c. 26, s. 1; 61 V., c. 24, ss. 2 and 3.'

I inclose with this, for your inspection, the labels taken from the following samples of the present collection, viz.:—40262, 30808, 30699, 30690, 36799, 36798, 38570, 38564, 39526, 41181, 38561, 39535, 38568, 40264, 38562 and 40265, in all of which I am of opinion that the requirements of the Adulteration Act are not fairly met; either because of the smallness of the type used, or the want of proper background (see 38564 and 39526) which makes the word 'Compound' indistinct. The labels 38565, 37700, 30810, 38567 and 41180 contain the word 'Mixture' or 'Compound' in distinct lettering; but in the first two cases, it is placed in such a way as to escape ready notice. I would respectfully advise the adoption of a ruling, something like that authorized for Germany, in regard to which I quote from the Second Edition of the 'Deutsches Nahrungsmittbuch' 1909, page 283:—

1. Every declaration must be placed on the same side of the package on which the content of the package is printed.
2. The declaration may be printed on the main label, or on a special label; but in the latter case, this special label must be affixed directly above or below the main label.
3. In the labelling of Compound Jams, no word on the label must be printed in larger characters than the word 'Compound'.
4. In case of the word 'Compound' being printed on the main label, it must be placed directly over or under the name of the jam, and parallel with this.

5. The word 'Compound' must be printed in an easily legible and dark lettering, upon a light background.
6. If the normal contents of a jam are specially emphasized on the label, this must not be done in a larger type than the word 'Compound'.
7. On containers more than 16 cm. ( $6\frac{1}{2}$  inch.) high, the small letters must be 3 mm. ( $\frac{1}{8}$  inch.), and on larger containers 5 mm. ( $\frac{3}{16}$  inch.) in height.  
I beg to recommend the publication of this report as Bulletin No. 194.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*

## BULLETIN No. 194—

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.		

## DISTRICT OF NOVA SCOTIA—

1909.							
Aug. 3	Fruit Jam..	41711	S. M. Lockhart & Co., New Glasgow, N.S.	3 jars.	30	W. P. Hartley, London, Eng.	Strawberry with gooseberry juice added.
" 4	"	41712	Ryan Bros., Truro, N.S.	3 "	75	T. Lipton, London, Eng.	Pure Strawberry.....
" 4	"	41713	H. W. Ryan & Co., Truro, N.S.	3 "	60	Simcoe Canning Co., Simcoe, Ont.	" " .....
" 11	"	41714	Wm. Law & Co., Yarmouth, N.S.	3 "	54	Aylmer Canning Co., Aylmer, Ont.	Raspberry.....
" 11	"	41715	Lovitt & Lovitt, Yarmouth, N.S.	3 "	60	E. D. Smith, Winona, Ont.	" Strawberry.....
" 13	"	41716	Bauld Bros. & Co., Ltd., Halifax, N.S.	3 "	50	Crosse & Blackwell, London, Eng.	" Raspberry.....
" 13	"	41717	John Tobin & Co., Halifax, N.S.	3 "	85	Heinz & Co., Pittsburgh, Pa.	" Strawberry.....
" 13	"	41718	J. Frank Crowe & Co., Halifax, N.S.	3 "	65	C. & E. Morton, London, Eng.	" " .....
" 13	"	41719	Wentzell, Ltd., Halifax, N.S.	3 "	75	W. P. Hartley, London, Eng.	Raspberry and gooseberry.
" 13	"	41720	J. S. Creed, Halifax, N.S.	3 "	75	Thos. Lipton, London, Eng.	" Raspberry.....

## DISTRICT OF PRINCE EDWARD ISLAND—

July 19	Fruit Jam..	38561	J. A. Farquharson, 3 bots. Charlottetown.	30	Ozo Manufg. Co., Montreal.	Strawberry Compound	
" 19	"	38562	John McKenna, 3 " Charlottetown.	30	J. A. Lytle & Co., Toronto, Ont.	Raspberry	"
" 21	"	38563	J. D. Hume, Murray River.	42	R. F. Maddigan, Charlottetown.	Pure Raspberry.....	
" 21	"	38564	A. M. Ross, Murray River.	45	J. W. Windsor, Montreal.	Raspberry Compound	
" 26	"	38565	P. A. Smith, Charlottetown.	36	Aylmer Canning Co., Canada.	Strawberry	"
" 27	"	38566	P. A. McKenzie, 3 " Hunter River.	36	Vendor.....	Pure Strawberry. ....	
" 27	"	38567	E. Campbell, North Wiltshire.	36	T. Upton & Co., Hamilton.	Raspberry Compound	
" 28	"	38568	Waugh & Steeves, Summerside.	36	The Simcoe Canning Co., Simcoe, Ont.	Strawberry	"
" 28	"	38569	R. T. Holman, Ltd., Summerside.	60	J. W. Windsor, Montreal.	" Balmoral Brand."	
" 28	"	38570	G. W. Warren, Summerside.	36	Hudon, Hebert & Co., Montreal.	Strawberry Compound	

## FRUIT JAMS.

SOLIDS PER CENT.			RESULTS OF ANALYSIS.										Number of Sample.	Remarks and Opinion of the Chief Analyst.
Insoluble.	Soluble.	Total.	Polarization (Normal Solution).			Residual Cane Sugar.	Soluble matter other than Cane Sugar.	Preservative.	Dyes.	Microscopic Examination.				
		Water.	Direct.	Invert.	Differ- ence.									

R. J. WAUGH, INSPECTOR.

p. c.		p. c.	p. c.										
6.52	66.04	72.56	27.44	+28.7	-20.8	40.5	36.6	29.44	None...	None...	Straw- berry tissues	41711	Genuine.
9.44	62.34	71.78	28.22	+18.7	-18.4	37.1	27.4	34.90	"	"	"	41712	"
13.43	53.70	67.13	32.87	+11.0	-17.5	28.5	21.1	32.60	"	"	"	41713	"
7.83	56.18	66.01	35.90	+7.5	-20.3	27.8	20.6	35.52	"	Present	Rasp- berry tissues	41714	" but dyed
4.40	64.14	68.54	31.46	+6.1	-19.9	26.0	19.3	44.84	"	None...	Straw- berry tissues	41715	Genuine.
10.37	56.52	67.00	32.91	+8.4	-19.8	28.2	20.9	35.73	"	"	Rasp- berry tissues	41716	"
7.83	64.18	72.01	27.90	+16.4	-15.0	31.4	23.3	40.88	"	"	Straw- berry tissues	41717	"
7.48	60.42	67.90	32.10	+10.1	-19.0	29.1	21.7	38.72	"	"	"	41718	"
3.26	65.40	68.66	31.34	+6.8	-20.6	27.4	20.3	45.10	"	"	Rasp- berry & goose- berry tissues	41719	
4.16	68.60	72.76	27.24	+20.8	-23.6	43.4	32.0	36.00	"	"	Rasp- berry tissues	41720	"

THEO. MOORE, INSPECTOR.

.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38561	Marked 'Com- pound.'
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38562	"
8.85	60.10	68.95	31.05	-8.8	-17.7	8.9	6.60	53.50	None...	None...	Rasp- berry tissues	38563	Genuine.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38564	Marked 'Com- pound.'
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38565	"
4.91	52.60	57.51	42.49	-9.6	-13.8	4.2	3.1	49.50	None...	None...	Straw- berry tissues	38566	Genuine.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38567	Marked 'Com- pound.'
3.24	63.46	66.70	33.30	+74.9	+48.1	26.8	19.8	43.66	Salicylic acid.	Present	Straw- berry tissues	38568	"
5.64	67.80	73.44	26.56	+14.3	-20.5	34.8	25.8	42.00	None...	None...	"	38569	Genuine.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38570	Marked 'Com- pound.'

Date of Collection.	Name of Sample.	Number of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

## DISTRICT OF NEW BRUNSWICK—

1909.							
July 26	Fruit Jam.	39526	Baird & Peters, St. John, N.B.	3 jars.	25	J. W. Windsor, Montreal.	Strawberry Compound
Aug. 5	"	39527	Inches & Grimmer, St. Stephen, N.B.	3 "	75	Sugars & Canners Ltd., Montreal.	Raspberry 'Diamond Brand'.
" 5	"	39528	P. H. McKenna, St. Stephen, N.B.	3 "	75	W. P. Hartley, London, Eng.	Strawberry guaranteed absolutely Pure
" 10	"	39529	H. G. Nobles, Woodstock, N.B.	3 "	75	Chivers & Sons, Ltd., Histon, Cambridge	Raspberry with Fruit Jelly.
" 10	"	39530	J. Rankin Brown, Woodstock, N.B.	3 "	75	E. D. Smith, Winona Ont.	Strawberry.....
" 17	"	39531	The Sussex Mercantile Co., Ltd., Sussex, N.B.	3 "	39	Ozo Co., Ltd., Montreal.	Raspberry Compound.
" 18	"	39532	The 2 Barkers Ltd., Moncton, N.B.	3 "	69	The Wm. Davies Co. Ltd., Toronto.	Raspberry.....
" 18	"	39533	H. F. Dobson, Moncton, N.B.	3 "	60	Aylmer Canning Co. Ltd., Aylmer, Ont.	Strawberry.....
" 19	"	39534	A. J. Loggie, Chat ham, N.B.	3 "	60	E. D. Smith, Winona Ont.	Plum.....
" 19	"	39535	M. Bannon, New castle, N.B.	3 "	45	Simcoe Canning Co., Simcoe, Ont.	Strawberry Compound

## DISTRICT OF QUEBEC—

July 20	Fruit Jam.	36601	N. B. Laroche, St Croix Lotbiniere.	3 bots.	45	Whitead & Turner, Quebec.	Raspberry.....
" 21	"	36602	J. B. Devillers, St. Edouard, Lotbiniere.	3 "	66	" " "	Strawberry.....
" 21	"	36603	Mal. S. Beaudet, St. Edouard Lotbiniere.	3 "	40	Bedard & freres, Quebec.	" .....
" 21	"	36604	A. Paris, Lotbiniere.	3 "	75	Whitead & Turner, Quebec.	" .....
" 22	"	36605	Jos Gauvin, St. Jean Deschaillons.	3 "	60	Unknown.....	" .....
" 22	"	36606	Alphonse Douville, St. Jean Deschailons.	3 "	60	A. B. Dupuis, Quebec.	" .....
" 20	"	36797	W. Lafleur, St. Antoine de Tilly.	3 "	105	L. Letourneau, Quebec.	Raspberry.....
" 20	"	36798	P. Normand, St. Antoine de Tilly.	3 "	39	Unknown .....	Strawberry.....
" 20	"	36799	" " " 3 "	30	" .....	Raspberry.....	
" 20	"	36800	N. B. Laroche, St. Croix Lotbiniere.	3 "	60	Whitead & Turner, Quebec.	Strawberry.....

## FRUIT JAMS.

J. C. FERGUSON, INSPECTOR.

p. c.	p. c.	p. c.	p. c.				p. c.	p. c.						
4.43	69.04	73.47	26.53	+13.5	-12.2	25.7	19.0	50.04	Salicylic acid.	Present.	Rasp- berry tissues	39526	Marked 'Compound.'	
3.63	46.44	50.07	49.93	+23.6	-22.6	46.2	34.1	12.34	None...	None...	Straw- berry tissues	39527	Genuine, but con- tains a preserva- tive and a dye.	
5.29	70.42	75.71	24.29	+18.0	-20.6	38.6	28.6	41.82	" ... "	" ... "	Rasp- berry tissues	39528	Genuine, water content is high.	
6.00	67.54	73.54	26.46	- 7.0	-22.2	15.2	11.3	56.24	" ... "	" ... "	Straw- berry tissues	39529	Genuine.	
8.30	50.86	59.16	40.84	+18.9	-15.0	33.9	25.0	25.86	None...	Present.	Rasp- berry tissues	39530	"	
5.67	59.60	65.27	34.73	0.0	-19.2	19.2	14.2	45.40	" ... "	" ... "	Straw- berry tissues	39531	Marked 'Com- pound.'	
10.50	54.26	64.76	35.24	- 6.1	-19.2	13.1	9.6	44.60	" ... "	None...	Plum tissues	39532	Genuine, is dyed.	
													39533	"
													39534	Genuine.
													39535	Marked 'Com- pound.'

**E. BELAND, INSPECTOR-**

## BULLETIN No. 194—

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.		

## DISTRICT OF ST. HYACINTHE

1909.							
July 10	Fruit Jam..	975	O. Demers, La Providence, St. Hyacinthe.	3 cans.	45	The Montreal Canning & Preserving Co., Montreal.	Peach.....
" 19	"	976	J. Dagenais & Cie, 3 jars Farnham.	106	E. D. Smith, Winona, Ont.	Pure Raspberry.....	
" 20	"	977	G. Dupuis, St. Jean.....	" 30	Vendor .....	Strawberry.....	
" 21	"	978	L. T. Trempe, Sorel.....	" 75	The Ozo Co., Montreal.	" .....	
" 22	"	979	Victoriaville Grocery Store, Victoriaville	3 cans.	54	Miller Bros., Baltimore, Md.	Raspberry, guaranteed pure.
" 23	"	981	McRae Bros., Rich. 3 glass-mond.	3 glasses.	90	Lockery Bros., Montreal.	Strawberry, " Wagstaff."
Aug. 3	"	982	A. H. Moore & Co., 3 Magog.	" 65	Forbes Bros., Montreal.	Strawberry.....	
" 4	"	983	A. Plamondon, St. Céaire.	" 45	The Ozo Co., Montreal.	Raspberry, guaranteed pure.	
" 6	"	984	Raymond freres, St. Hyacinthe.	" 90	Crosse & Blackwell, England.	Strawberry.....	
" 7	"	985	E. Chaput, L'Egypte 3 jars.	160	Vendor .....	Strawberry, guaranteed pure.	

## DISTRICT OF MONTREAL

July 17	Fruit Jam..	40256	St. Louis Preserving Co., Ville St. Louis	3 jars.	40	Vendors .....	Raspberry, guaranteed pure.
" 17	"	40257	" "	3 "	45	" .....	Strawberry, guaranteed pure.
" 20	"	40258	Mrs. Luke, Bleury St., Montreal.	3 "	60	Vendor .....	Strawberry, pure Homemade.
" 20	"	40259	" "	3 "	60	" .....	Raspberry, pure Homemade.
" 22	"	40260	Richer & Page, Val-leyfield, P.Q.	3 "	75	Sugars and Canners, Ltd., Montreal.	Raspberry, pure fruit.

## FRUIT JAMS.

SOLIDS PER CENT.				RESULTS OF ANALYSIS.										Number of Sample.	Remarks and Opinion of the Chief Analyst.
Insoluble.	Soluble.	Total.	Water.	Polarization (Normal Solution).			Residual Cane Sugar.	Solublematter other than Cane Sugar.	Preservatives.	Dyes.	Microscopical Examination.				
p. c.	p. c.	p. c.	p. c.	Direct.	Invert.	Differ. ence.	p. c.	p. c.							
<b>J. C. ROULEAU, INSPECTOR.</b>															
9.54	59.60	69.14	30.86	-14.7	-15.4	0.7	0.5	59.10	None...	None...	R a s p - berry tissues		975	In bad con- dition. Should not have been sold. Doubtful.	
5.04	51.02	56.06	43.94	+ 2.1	- 16.4	18.5	13.7	37.32	" ...	" ...	Straw- berry tissues		976	Genuine.	
2.85	71.15	74.03	26.97	+ 49.5	- 3.2	52.7	38.9	32.28	" ...	Present.	"		978	Contains glucose & a dye. Doubtful	
6.89	27.28	34.17	65.83	+ 0.4	- 9.3	9.7	7.1	20.18	Salicylic acid.	None...	Straw- berry tissues		979	Not a jam	
6.55	56.86	63.41	36.59	+ 23.4	- 14.5	37.9	28.0	28.86	None...	Present.	"		981	Genuine, but water content high, and contains a preser- vative.	
3.45	67.62	71.07	28.93	+ 50.2	- 2.8	78.2	39.2	28.42	" ...	None...	R a s p - berry tissues		982	Genuine, but dyed	
9.20	58.28	67.48	32.52	+ 23.8	- 16.8	40.6	29.9	28.38	" ...	" ...	Straw- berry tissues		983	Contains glucose. Doubtful	
3.70	38.94	47.64	52.36	+ 8.8	- 16.3	25.1	18.5	20.44	" ...	" ...			984	Genuine.	
														985	Genuine, but water content high.
<b>J. J. COSTIGAN, INSPECTOR.</b>															
7.52	58.98	66.30	33.50	+ 21.5	7.9	20.4	21.7	37.28	Salicylic acid.	Present.	R a s p - berry tissues		40256	Genuine, but pre- servative and dye present.	
4.90	73.32	78.31	21.60	+ 24.8	- 11.2	36.0	26.8	46.52	"	"	Straw- berry tissues		40257	"	
3.18	59.16	62.34	37.66	+ 2.5	- 18.9	21.4	15.8	43.36	None...	None...	"		40258	Genuine.	
10.06	54.94	65.00	35.00	- 0.7	- 18.2	17.5	13.97	40.97	"	"	R a s p - berry tissues		40259	"	
8.78	58.20	66.96	33.02	+ 11.0	- 19.2	30.2	22.4	35.80	Salicylic acid.	Present.	"		40260	Genuine, but pre- servative and dye present.	

\* Peach jam. Very old, dried out. Impossible to sample it.

† Canned fruit, not a jam.

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.	Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.	

## DISTRICT OF MONTREAL—

1909.						
July 22	Fruit Jam..	40261	Richer & Page, Val-leyfield, P.Q.	.75	Sugars and Canners Ltd., Montreal.	Strawberry, pure fruit
" 27	"	40262	Alphonse Raymond, 340 Plessis, Montreal.	.105	Vendor .....	Strawberry, pure.
" 27	"	4 263	" " " .3 " .25			Raspberry.....
" 27	"	40264	Joseph Raymond & Co., St. Timothy St., Montreal.	.25		" Compound..
" 27	"	40265	J. D. Boileau, Bon-secours St., Montreal.	.30	L. Semeteys, Montreal.	" "

## DISTRICT OF OTTAWA—

Aug. 7	Fruit Jam..	41269	E. C. Armand, Arn-prior.	.7	Aylmer Canning Co., Aylmer, Ont.	Raspberry. Pure....
" 11	"	41270	Downing Bros, Ottawa	.45	J. G. Whyte & Son., Ottawa.	Strawberry. Pure Fruit. 'Oval' Brand.
" 11	"	41271	J. J. Crozier, Ottawa	.75	Unknown .....	Strawberry Jam.....
" 13	"	41272	Berman & Levinson, Ottawa	.45	J. G. Whyte & Son., Ottawa.	Raspberry. Pure Fruit 'Oval' Brand.
" 13	"	41273	McDonald Bros., Ottawa	.105	F. J. Castle Co., Ottawa.	Raspberry. Guaranteed pure. Ozo Co.
" 14	"	41274	J. McParland & Bros, Gananoque.	.45	W. G. Craig & Co., Kingston.	Strawberry preserves, guaranteed absolutely pure.
" 19	"	41275	E. A. Lisk, Eganville	.60	F. J. Castle Co., Ottawa.	Raspberry....
" 21	"	41276	W. West, Almonte	.75	Mathewson's Sons, Montreal.	" "
" 23	"	41277	T. Lindsay Ltd., Ottawa	.60	Bate & Sons, Ottawa	Strawberry Jam....
" 24	"	41278	Chelsea Trading Co. Ltd., Ottawa.	.105		Raspberry Pure. ....

## FRUIT JAMS.

SOLIDS PER CENT.				RESULTS OF ANALYSIS.										Number of Sample.	Remarks and Opinion of the Chief Analyst.
Insoluble.	Soluble.	Total.	Water.	Polarization (Normal Solution).			Residual Cane Sugar.	Soluble matter other than Cane Sugar	Preservatives.	Dyes.	Microscopic Examination.				
p. c.	p. c.	p. c.	p. c.	Direct.	Invert.	Differ. ence.									
<i>J. J. COSTIGAN, INSPECTOR—Concluded.</i>															
19.62	64.50	69.12	30.88	+ 0.5	- 21.0	21.5	15.9	48.60	Salicylic acid.	Present.	Strawberry tissues	40261	Genuine, but preservative and dye present.		
...	...	...	...	...	...	...	...	...	...	...	...	40262	Marked compound—but indistinctly.		
2.84	64.94	67.78	32.22	- 6.3	- 17.3	11.0	7.9	57.04	None...	None...	Strawberry tissues	40263	Genuine.		
...	...	...	...	...	...	...	...	...	...	...	...	40264	Sold as compound		
...	...	...	...	...	...	...	...	...	...	...	...	40265	"		
<i>J. A. RICKEY, INSPECTOR.</i>															
6.96	40.30	47.25	52.75	+ 9.1	- 12.5	21.6	15.9	24.40	None...	None...	Raspberry tissues	41269	Genuine.		
4.84	67.34	72.19	27.82	+ 12.2	- 20.3	32.5	24.1	43.24	Salicylic acid.	Present.	Strawberry tissues	41270	Genuine, but preservative and dye present.		
6.21	67.12	73.33	26.67	+ 23.1	- 20.5	43.0	32.2	34.92	None...	None...	"	41271	Genuine.		
10.86	55.08	65.94	34.06	- 9.6	- 15.4	5.8	4.3	50.78	Salicylic acid.	"	Raspberry tissues	41272	Genuine, but preservative present.		
6.10	69.66	75.76	24.24	+ 26.0	- 10.7	35.7	24.9	44.76	"	"	"	41273	A trace of dextrine and a preservative are present.		
5.40	60.48	65.88	34.12	+ 8.8	- 22.2	31.0	22.0	37.58	None...	"	Strawberry tissues	41274	Doubtful. Genuine.		
3.23	74.06	77.29	22.71	+ 12.7	- 22.0	34.0	25.8	48.26	"	Present.	Raspberry tissues	41275	Genuine, but dyed.		
6.36	72.58	78.94	21.06	+ 1.8	- 19.8	21.6	15.9	56.68	"	"	"	41276	"		
7.67	64.94	72.61	27.50	+ 20.7	- 11.5	41.2	29.2	35.74	"	None...	Strawberry tissues	41277	Contains a small quantity of glucose.		
5.86	61.62	67.48	32.52	+ 5.8	- 19.4	25.2	18.2	43.42	Salicylic acid.	Present.	Raspberry tissues	41278	Doubtful. Genuine, but preservative and dye present.		

## BULLETIN No. 194—

Date of Collection.	Nature of Sample.	Number of Sample.	Name and Address of Vendor.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
				Quantity.	Cents.		

## DISTRICT OF KINGSTON—

1909.							
Aug. 6	Fruit Jam..	41172	G. Pearson, Belleville.	3 bot.	60	Belleville Fruit Vinegar.	Strawberry.....
" 6	"	41173	" "	3 "	60	"	Raspberry.....
" 6	"	41174	Wallbridge & Clarke, Belleville.	3 "	75	Crosse & Blackwell, London.	".....
" 6	"	41175	" "	3 "	75	"	Strawberry.....
" 6	"	41176	W. D. Stephens, Port Hope.	3 "	60	Graman, Hamilton.	Currant.....
" 6	"	41177	" "	3 "	60	"	Raspberry.....
" 6	"	41178	F. H. Brown, Port Hope.	3 "	70	Winona, Ont.....	".....
" 6	"	41179	" "	3 "	75	Lipton, London.....	Pineapple.....
" 6	"	41180	J. Dunfee, Port Hope	3 "	30	Upton, Hamilton....	Raspberry.....
" 6	"	41181	" "	3 "	30	Aylher.....	Black Currant.....

## DISTRICT OF TORONTO—

Aug. 5	Fruit Jam..	41319	J. Usher & Son, St. David.	3 tins.	35	Vendors.....	Strawberry.....
" 6	"	41320	Canadian Canners Ltd., Hamilton.	3 pks.	45	Simcoe Canning Co., Simcoe.	Strawberry preserves, pure.
" 6	"	41321	Wagstaffe, Ltd., Hamilton.	3 "	50	Vendors.....	Strawberry, pure.....
" 9	"	41322	Mrs. A. Barthlett, Toronto.	3 "	35	Vendor.....	".....
" 10	"	41323	E. D. Smith, Winona	3 "	60	".....	".....
" 6	"	41324	The Canada Preserving Co., Ltd., Hamilton.	3 "	48	Vendors.....	Raspberry, pure....
" 6	"	41325	Aylmer Canning Co., Ltd., Hamilton.	3 "	55	".....	".....
" 6	"	41326	T. Upton Co., Ltd., Hamilton.	3 "	55	".....	".....
" 12	"	41327	The T. Eaton Co., Ltd., Toronto.	3 "	90	Sprague, Warner & Co., Chicago, Ill.	".....
" 13	"	41328	The T. A. Lytle Co., Ltd., Toronto.	3 "	50	Vendors .....	".....

## **FRUIT JAMS.**

JAS. HOGAN, INSPECTOR.

**H. J. DAGER, INSPECTOR**

Date of Collection.	Nature of Sample.	Number of Sample.	COST.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
			Quantity.	Cents.		

**DISTRICT OF LONDON—**

1909.

July 21	Fruit Jam	30683 A. McCrea, Guelph	3 jars	75	E. D. Smith, Winona, Strawberry	Ont.
" 21	"	30684 Geo. Williams, Guelph	3 "	60	Upton & Co., Hamilton	"
" 23	"	30689 A. Beattie & Co., Stratford	3 "	75	Rose Leplant, Montreal	"
" 23	"	30690 Frank Lloyd, Stratford	3 "	45	J. Littell & Co., Raspberry	Toronto.
" 23	"	30691 James Lloyd, Stratford	3 "	45	Vendor. ....	Strawberry.
" 23	"	30694 Barnsdale Trading Co., Stratford	3 "	45	Simcoe Canning Co., Simcoe	
" 26	"	30699 R. H. Cutt, Goderich	3 "	30	Elliot, Mar & Co., London, Ont.	
" 21	"	30805 Richard Smith, Seaforth	3 cups	45	John Sloane, Toronto, Raspberry	
" 27	"	30808 A. G. Ault, Seaforth	3 jars	30	Aylmer Canning Co., Aylmer, Ont.	Current.
" 29	"	30810 H. Bartleff, Clinton	3 "	30	Upton & Co., Hamilton	Gooseberry Compound
" 29	"	30811 " "	3 cups	45	Unknown	Raspberry.

**DISTRICT OF WINDSOR—**

July 26	Fruit Jam	35985 Jas. Mahon, London, East.	3 jars	45	Simcoe Canning Co., Simcoe	Strawberry.
" 26	"	35987 Elliott Mar & Co., London	3 "	50	J. W. Windsor, Montreal	Raspberry.
" 26	"	35988 " "	3 "	50	"	Strawberry.
" 26	"	35989 T. A. Rowat, London	3 "	75	Crosse & Blackwell, London, Eng.	Raspberry.
" 26	"	35990 " "	3 "	75	Goodwillie & Son., Welland	Strawberry.
" 26	"	35991 Gorman Eckert & Co., London	3 "	Vendor	....	"

## FRUIT JAM.

SOLID IN PER CENT.				RESULTS OF ANALYSIS.								Number of Sample.	Remarks and Opinion of the Chief Analyst.
In soluble.	Soluble.	Total.	Water.	Polarization (Normal Solution).			Residual Cane Sugar.	Soluble matter other than Cane Sugar.	Preservatives.	Dyes.	Microscopical Examination.		
				Direct.	Invert.	Differ- ence.							
T. KIDD, INSPECTOR.													
6.61	56.20	66.81	43.19	- 2.1	- 21.9	19.8	14.6	35.60	None...	None...	Straw- berry tissues.	30683	Genuine.
6.59	58.84	65.43	34.57	+ 3	- 18.4	25.7	19.0	39.84	"	"	"	30684	"
2.88	70.42	73.30	26.70	+ 15.6	- 12.2	27.8	19.5	50.92	"	"	"	30689	"
												30690	Sold as Com- pound.
3.22	59.16	62.38	37.62	0.0	- 16.1	16.1	11.9	47.26	None...	None...	Straw- berry tissues.	30691	Genuine.
7.22	66.06	73.26	26.72	+ 37.1	- 22.0	59.1	43.7	22.36	"	"	"	30694	"
												30699	Sold as Com- pound.
9.37	56.06	65.45	34.55	- 13.4	18.5	5.1	3.7	52.38	Salicylic acid.	Present.	Rasp- berry tissue.	30605	Genuine, but con- tains pre- servative and dye.
												30606	Sold as Com- pound.
6.74	59.24	65.96	34.02	+ 0.7	- 17.3	18.0	13.3	45.94	None...	None...	Straw- berry tissues.	30610	"
												30611	Genuine.
JNO. TALBOT, INSPECTOR.													
6.61	65.30	71.91	28.09	+ 30.0	- 22.0	52.0	38.6	26.70	None...	None...	Straw- berry tissues.	35985	Genuine.
7.76	62.68	70.44	29.56	0.0	- 23.1	23.1	17.0	45.68	"	"	Rasp- berry tissue.	35987	"
1.75	66.90	71.65	28.36	+ 31.9	- 5.2	37.1	28.5	38.40	"	"	Straw- berry tissues.	35988	A trace of dextrine. Doubtful.
8.94	58.90	67.84	32.16	0.0	- 19.1	19.1	14.0	44.90	"	"	Rasp- berry tissues.	35989	Genuine.
7.51	44.74	52.25	47.75	+ 0.4	- 13.3	13.7	10.0	34.74	Salicylic acid.	Present.	Straw- berry tissues.	35990	Genuine, but con- tains a preserva- tive and a dye; water con- tent is high.
5.41	72.08	78.00	21.91	+ 30.6	- 14.7	45.3	38.5	30.30	None...	"	"	35991	A trace of dextrine and a dye. Doubtful.

## BULLETIN No. 194—

Date of Collection.	Nature of Sample.	Number of Sample.	Cost.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion).
			Quantity.	Gents.		

## DISTRICT OF WINDSOR—

1909.						
July 27	Fruit Jam.	35992	C. A. O'Neill, Inger- soll.	3 " . 25	Upton & Co., Hamil- ton.	Orange Marmalade..
" 27	"	35993	F. Williams, Wood- stock.	3 " . 75	W. P. Hartly, Lon- don, Eng.	Raspberry.....
" 27	"	35994	Poole & Co., Wood- stock.	3 " . 38	E. D. Smith, Winona Ont.	Green Gage.....
" 28	"	35997	McCormick Mfg. Co. London.	3 " . 35	Vendors .....	Red Currant.....

## DISTRICT OF MANITOBA—

July 21	Fruit Jam.	39751	G. F. & J. Galt, Winnipeg.	3 pkgs. 60	Vendors .....	Raspberry .....
" 21	"	39752	" .. 3 "	55 "	" ..	Strawberry.....
" 21	"	39753	K. MacKenzie & Co., Winnipeg.	3 " . 60	Crosse & Blackwell, London, Eng.	" ..
" 21	"	39754	The Codville Co., Winnipeg.	3 " . 55	W. P. Hartly, Liverpool & London.	" ..
" 21	"	39755	" .. 3 "	50	John Buchanan & Bro., Ltd., Glas- gow.	Raspberry.....
" 22	"	39756	A. Macdonald & Co., Winnipeg.	3 " . 49	E. D. Smith - Vinona Ont.	" ..
" 22	"	39757	" .. 3 "	56	Maconachie Bros., London, Eng.	" ..
" 22	"	39758	" .. 3 "	45	E. D. Smith, Winona Ont	Strawberry..
" 22	"	39759	Thos. H. Lock & Co., Winnipeg.	3 " . 50	Robertson's, Paisley, Manchester & Lon- don.	" ..
" 22	"	39760	" .. 2 "	50	Miller & Co., Belfast Ireland.	" ..

## DISTRICT OF CALGARY—

Aug. 3	Fruit Jam	35588	L. B. Cochrane, 3 bots. Medicine Hat.	100	Chevies & Sons Ltd., Cambridge, Eng.	Strawberry.....
" 3	"	35589	D. Milne Co., Ltd	3 " . 90	Crosse & Blackwell, London, Eng.	Raspberry.....
" 3	"	35590	R. Dunn, Medicine Hat.	3 " . 100	Empress Mfg. Co., Vancouver.	Strawberry.....

## FRUIT JAMS.

SOLIDS PER CENT.				RESULTS OF ANALYSIS.										Number of Sample.	Remarks and Opinion of the Chief Analyst.
Insoluble, Soluble.	Total.	Water.	Polarization (Normal Solution).	Residual Cane Sugar.	Soluble matter other than Cane Sugar.	Preservatives.	Dyes.	Microscopical Examination.							
JNO. TALBOT, INSPECTOR— <i>Concluded.</i>															

	p. c.	p. c.	p. c.	p. c.			p. c.	p. c.							
Orange marin- ade.	3.14	62.70	65.84	34.16	+41.3	-19.2	60.5	44.8	17.90	None...	None...	Orange marin- ade.	35992	Genuine.	
Rasp- berry tissues.	1.06	67.81	71.90	28.10	+11.2	-21.7	32.9	34.2	43.64	"	"	Rasp- berry tissues.	35993	"	
Plum tissues.	1.93	58.00	62.93	37.07	-6.3	-13.5	7.2	5.3	52.70	"	"	Plum tissues.	35994	"	
Red Currant tissues.	10.47	59.04	69.51	30.49	+2.3	-5.2	7.5	5.5	53.54	"	"	Red Currant tissues.	35997	"	

## A. C. LARIVIERE, INSPECTOR.

	3.31	69.06	72.37	27.63	+19.6	-21.0	40.6	30.0	39.06	None...	Present	Rasp- berry tissues	39751	Genuine, but dyed.
	2.52	64.06	66.58	33.42	+30.9	-18.4	49.3	36.4	27.66	"	"	Straw- berry tissues	39752	"
	5.70	61.74	67.44	32.56	+22.4	-18.9	41.3	30.5	31.24	"	"	None...	39753	Genuine.
	4.01	79.44	83.45	26.55	+26.9	-10.8	46.7	34.5	44.94	"	"	"	39754	"
	6.06	73.34	79.40	20.60	+15.7	-18.9	34.6	25.7	47.64	"	"	Rasp- berry tissues	39755	"
	3.21	62.67	65.88	34.12	+14.0	-24.5	36.5	28.5	34.17	"	"	"	39756	"
	4.55	70.30	74.91	25.00	+0.1	-24.5	33.6	24.8	45.56	"	Present	"	39757	"
	4.08	51.14	65.22	44.78	-1.8	-20.8	19.0	14.1	37.04	"	None...	Straw- berry tissues	39758	but dyed. Genuine.
	5.78	66.38	72.16	27.84	+16.6	-22.7	39.3	29.1	37.28	"	Present	"	39759	" but dyed.
	3.61	70.56	74.17	25.83	+18.7	-8.4	27.1	20.0	50.56	"	None...	"	39760	Genuine.

## R. W. FLETCHER, INSPECTOR.

	4.98	69.58	74.56	25.44	+21.5	-19.9	41.4	30.6	38.78	None...	None...	Straw- berry tissues	35588	Genuine.
	6.50	61.50	68.06	31.94	-3.3	-19.2	15.9	11.7	49.80	"	"	Rasp- berry tissues	35589	"
	5.80	66.86	72.66	27.34	+30.5	-22.2	52.7	37.9	28.96	Benzoic acid.	Present	Straw- berry tissues	35590	Genuine, but with preserva- tive and a dye.

## BULLETIN No. 194—

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

## DISTRICT OF CALGARY—

1909							
Aug.	5	Fruit Jam.	35591	Hudson Bay Co., Lethbridge.	3 tins.	75	Robertson, Paisley, Manchester and London.
"	5	"	35592	H. Bentley Co., Lethbridge.	3 bots.	75	Wagstaff, Ltd., Hamilton.
"	10	"	35593	Douglas Bros., Edmonton.	3 "	100	Thos. Lipton, London, Eng.
"	10	"	35594	Hudson Bay Co., Edmonton.	3 "	60	Simcoe Canning Co., Simcoe.
"	11	"	35595	Acme Co., Ltd., Edmonton.	3 "	90	Wagstaff, Ltd., Raspberry Hamilton.
"	10	"	35596	J. H. Morris & Co., Edmonton.	3 "	90	Empress Mfg. Co., Vancouver.
"	11	"	35597	L. & W. Campbell, Edmonton.	3 "	75	Crosse & Blackwell, London, Eng.

## DISTRICT OF VANCOUVER—

July	26	Fruit Jam.	37696	Empress Mfg. Co., Vancouver.	3 pks.	75	Vendors . . . . .	Raspberry, guaranteed absolutely pure.
"	26	"	37697	R. Schilling, Vancouver.	3 "	70	Jas. Robertson & Sons, Paisley, Scot	Strawberry . . . . .
"	26	"	37698	Kelly, Douglas & Co., Vancouver.	3 "	60	Jas. Keiller & Sons, Ltd., Dundee.	" . . . . .
"	26	"	37699	Hudson Bay Co., Vancouver.	3 tins.	40	Crosse & Blackwell, London, Eng.	" . . . . .
"	26	"	37700	E. W. Leeson, Vancouver.	3 "	100	Climax Mfg. Co., Vancouver.	" . . . . .
"	26	"	37701	W. H. Malkin & Co., Vancouver.	3 jars.	45	Chuvers & Sons, Ltd., Cambridge.	Raspberry, with fruit jelly.
"	26	"	37702	W. J. McMillan & Co., Vancouver.	3 tins.	45	Taylor Bros., Sydney, Australia.	Raspberry, guaranteed absolutely pure.
"	27	"	37703	Adams & Dean, New Westminster.	3 "	50	Sugars and Canners, Ltd., Montreal.	Strawberry . . . . .
"	28	"	37704	H. A. Edgett & Co., Vancouver.	3 "	100	Vendors . . . . .	" . . . . .
"	28	"	37705	Woodwards' Dept. Stores, Vancouver.	3 "	75	C. & E. Morton, London, Eng.	Raspberry . . . . .

## FRUIT JAMS

SOLIDS PER CENT.				RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinion of the Chief Analyst.
Insoluble.	Soluble.	Total.	Water.	Polarization (Normal Solution.)			Residual Cane Sugar.	Solubles other than cane sugar.	Preservatives.	Dyes.	Microscopical Examination.				
p.e.	p.e.	p.e.	p.e.	Direct.	Invert.	Difference.									
3.76	65.40	69.16	30.84 + 6.1	-21.0	27.1	20.0	45.40	None...	None...	Raspberries.	35591	Genuine.			
6.38	59.26	65.64	34.36 + 32.5	-19.6	52.1	38.6	20.66	Salicylic acid.	Present.	Strawberry tissues.	35592	" but with preservative and a dye.			
3.20	67.20	70.40	29.60 + 1.7	-20.1	21.8	16.2	51.00	None...	None...	"	35593	Genuine.			
8.92	57.18	66.10	33.90 + 29.0	-19.2	48.2	35.7	21.48	"	"	"	35594	"			
4.47	63.34	67.81	32.19 + 21.0	-20.1	41.1	30.3	33.04	Salicylic acid.	Present.	Raspberries.	35595	" but preservative and a dye present.			
3.61	66.42	70.03	29.97 + 32.7	-21.5	34.2	40.0	26.42	None...	"	Strawberry tissues.	35596	Genuine, but dyed.			
4.85	59.64	64.49	35.50 + 4.4	-18.2	22.6	16.7	42.94	"	None...	Raspberries.	35597	Genuine.			

## J. F. POWER, INSPECTOR.

3.57	71.76	75.33	24.67 + 1.7	-21.5	23.2	17.2	54.56	None...	None...	Raspberry tissues.	37606	Genuine.	
3.71	66.78	70.49	29.51 + 19.2	-19.4	38.6	28.6	38.18	"	Present.	Strawberry tissues.	37607	" but contains a dye.	
11.00	63.26	74.26	25.74 + 0.4	-16.6	17.0	12.5	50.76	"	None...	"	37608	Genuine.	
3.95	63.70	67.70	32.39 + 9.5	-15.4	24.9	18.4	45.30	"	"	"	37609	"	
5.15	66.64	71.79	28.21 - 7.4	-22.6	15.2	11.3	55.34	None...	None...	Raspberry tissues.	37700	Solid as mixture.	
7.83	56.82	66.05	33.35 + 2.6	-18.5	21.1	15.6	43.22	"	"	"	37701	Genuine.	
3.85	71.54	75.39	24.61 - 2.1	-15.4	13.3	9.8	61.74	Salicylic acid.	Present.	Strawberry tissues.	37702	"	
6.34	61.16	67.50	32.50 + 2.8	-19.2	22.0	16.3	44.86	None...	None...	"	37703	Genuine, but contains a preservative and dye.	
4.78	68.04	72.82	27.18 + 17.8	-23.4	41.2	30.5	37.04	"	Present.	Raspberry tissues.	37704	Genuine.	
												37705	" but dyed.

Date of Collection.	Nature of Sample.	No. of Sample.	Name and Address of Vendor.	COST.		Name and Address of Manufacturer or Furnisher as given by the Vendor.	Inspector's Report. (Is not an expression of opinion.)
				Quantity.	Cents.		

## DISTRICT OF VICTORIA—

1909							
Aug. 5	Fruit Jam...	41526	Windsor <b>Grocery</b> Co., Victoria, B.C.	3 pks.	90	Crosse & Blackwell, London, Eng.	Raspberry.....
" 5	" . . .	41527	Fred. Carne, Victoria, B.C.	3 "	75	Wm. P. Hartley, London, Eng.	Strawberry.....
" 5	" . . .	41528	Saunders <b>Grocery</b> Co., Ltd., Victoria, B.C.	3 "	75	Empress Mfg. Co., Vancouver.	Raspberry, 'Empress'
" 5	" . . .	41529	"	3 "	75	" . . .	Strawberry, "
" 6	" . . .	41530	D. H. Ross & Co., Victoria, B.C.	3 "	75	James Robertson & Sons, Paisley, Scot.	" " " Golden Shred."

## FRUIT JAMS.

SOLIDS PER CENT.			RESULTS OF ANALYSIS.										No. of Sample.	Remarks and Opinion of the Chief Analyst.	
Insoluble.	Soluble.	Total.	Water.			Polarization (Normal Solution.)			Residual Cane Sugar.	Soluble matter, other than cane sugar.	Preservatives.	Dyes.	Microscopical Examination.		
			Direct.	Invert.	Differ- ence.										

D. O'SULLIVAN, INSPECTOR.

10·50	60·08	70·58	29·42	+12·2	-19·4	31·6	23·0	37·08	None	... None	R a s p - b e r r y t i s s u e s .	41526	Genuine.	
7·37	56·36	62·73	37·27	+18·5	-18·4	36·9	27·3	28·06	"	... "	S t r a w - b e r r y t i s s u e s .	41527	"	
3·99	67·20	71·19	28·81	+21·7	-19·2	40·9	30·3	36·90	"	... "	R a s p - b e r r y t i s s u e s .	41528	"	
5·62	69·56	75·18	24·82	+23·6	-22·2	45·8	33·9	35·66	"	... Present.	S t r a w - b e r r y t i s s u e s .	41529	" but dyed.	
8·21	64·14	72·35	27·65	+26·8	-21·9	48·7	35·9	28·24	Salicylic acid.	"	"		41530	Genuine, but dyed and con- tains a preserva- tive.